UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,279	07/01/2005	Go Tejima	10030242-04	6614

27623 7590 05/03/2006

OHLANDT, GREELEY, RUGGIERO & PERLE, LLP
ONE LANDMARK SQUARE, 10TH FLOOR
STAMFORD, CT 06901

EXAMINER	
VELEZ, ROBERTO	

ART UNIT	PAPER NUMBER
2829	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/541,279	TEJIMA ET AL.	
	Examiner	Art Unit	
	Roberto Velez	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 July 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/01/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1, 7, 9-10 are objected to because of the following informalities: In claim 1, line 1 where it says an inspecting apparatus *which* comprises, the word *which* should be deleted. The same thing should be done in claims 7, 9-10. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 5-7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Mazur (US Pat. 6,900,652)*** in view of ***Ichioka et al. (US Pat. 5,546,013)***.

Regarding claim 1, ***Mazur*** shows (Figures 1-3) a flexible membrane probe and method of use thereof comprising: a signal supply device [22] for supplying signals; a probe [6] positioned facing the substrate [10]; a detector [36] for detecting signals flowing to the probe [6]; and a fluid supply device [34] for supplying a dielectric fluid between the substrate [10] and the probe [6].

Mazur fails to disclose supplying signals to a thin-film transistor active matrix substrate for an organic EL panel. However, ***Ichioka et al.*** shows (Figures

1-14) supplying signals (using tester [46]) to a thin-film transistor active matrix substrate for an organic EL panel [12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Ichioka et al.*** into the device of ***Mazur*** by supplying signals to a thin-film transistor active matrix substrate for an organic EL panel. The ordinary artisan would have been motivated to modify ***Mazur*** in the manner set forth above for the purpose of (Column 2, Lines 45-47) to obtain information concerning at least of a level of functionality of said thin-film transistor active matrix substrate for an organic EL panel and quality of contact to said lines.

Regarding claim 2, ***Mazur*** discloses everything as claimed above in claim 1; in addition, ***Mazur*** discloses (Column 3, Line 64) wherein said signal supply device [22] supplies non-standing wave signals (since is an AC voltage, it will be a non-standing wave signal).

Regarding claim 5, ***Mazur*** discloses everything as claimed above in claim 1.

Mazur is silent about wherein said probe [6] has a plurality of electrodes for inspecting. However, ***Ichioka et al.*** shows (Figures 1-14) wherein said probe [28] has a plurality of electrodes [22] for inspecting.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Ichioka et al.*** into the device of ***Mazur*** by inspecting a plurality of electrodes with said probe. The ordinary

artisan would have been motivated to modify ***Mazur*** in the manner set forth above for the purpose of (Column 2, Lines 45-47) to obtain information concerning at least of a level of functionality of said thin-film transistor active matrix substrate for an organic EL panel and quality of contact to said lines.

Regarding claim 6, ***Mazur*** discloses everything as claimed above in claim 1; in addition, ***Mazur*** discloses (Column 4, Lines 56-67) wherein said detector [36] detects a current flowing to the probe [6].

Regarding claim 7, ***Mazur*** shows (Figures 1-3) a flexible membrane probe and method of use thereof comprising: bringing a probe [6] opposite a substrate [10]; introducing a dielectric fluid (using [34]) between the substrate [10] and the probe [6]; supplying signals (using [22]) to a closed circuit consisting of the substrate [10], the dielectric fluid (located inside the probe), and the probe [6]; and detecting (using [36]) signals flowing to the closed circuit [10].

Mazur fails to disclose bringing a probe opposite a thin-film transistor active matrix substrate for an organic EL panel. However, ***Ichioka et al.*** shows (Figures 1-14) bringing a probe [28] opposite a thin-film transistor active matrix substrate for an organic EL panel [12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Ichioka et al.*** into the device of ***Mazur*** by bringing a probe [28] opposite a thin-film transistor active matrix substrate for an organic EL panel. The ordinary artisan would have been motivated to modify ***Mazur*** in the manner set forth above for the purpose of

(Column 2, Lines 45-47) to obtain information concerning at least of a level of functionality of said thin-film transistor active matrix substrate for an organic EL panel and quality of contact to said lines.

Regarding claim 10, ***Mazur*** shows (Figures 1-3) a flexible membrane probe and method of use thereof comprising: bringing a probe [6] opposite a substrate [10]; introducing a dielectric fluid (using [34]) between the substrate [10] and the probe [6]; supplying signals (using [22]) to a closed circuit consisting of the substrate [10], the dielectric fluid (located inside the probe), and the probe [6]; and detecting (using [36]) signals flowing to the closed circuit [10], wherein (Column 4, Lines 45-55) the distance between the substrate [10] and the probe [6] is controlled by the amount of dielectric fluid that is introduced.

Mazur fails to disclose bringing a probe opposite a thin-film transistor active matrix substrate. However, ***Ichioka et al.*** shows (Figures 1-14) bringing a probe [28] opposite a thin-film transistor active matrix substrate [12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Ichioka et al.*** into the device of ***Mazur*** by bringing a probe [28] opposite a thin-film transistor active matrix substrate. The ordinary artisan would have been motivated to modify ***Mazur*** in the manner set forth above for the purpose of (Column 2, Lines 45-47) to obtain information concerning at least of a level of functionality of said thin-film transistor active matrix substrate for an organic EL panel and quality of contact to said lines.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Mazur (US Pat. 6,900,652)*** and ***Ichioka et al. (US Pat. 5,546,013)*** as applied to claim 1 above, and further in view of ***Jewett (US Pat. 4,123,989)***.

Regarding claims 3-4, combination of ***Mazur*** and ***Ichioka et al.*** disclose the claimed invention except for wherein said dielectric fluid is a water comprising polar molecules.

It would have been obvious matter of design choice to use water as a cooling fluid [***Jewett (US Pat. 4,123,989)]***, since applicant has not disclosed that water solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with any kind of dielectric fluid.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over ***Mazur (US Pat. 6,900,652)*** and ***Ichioka et al. (US Pat. 5,546,013)*** as applied to claim 7 above, and further in view of ***Applicant's Admitted Prior Art***.

Regarding claim 8, combination of ***Mazur*** and ***Ichioka et al.*** disclose everything as claimed above in claim 7.

Combination of ***Mazur*** and ***Ichioka et al.*** fail to disclose wherein a detecting surface area of the probe is wider than the surface area of a pixel on the substrate. However, ***Applicant's Admitted Prior Art*** discloses (Page 3, Lines 11-15) wherein a detecting surface area of the probe is wider than the surface area of a pixel on the substrate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Applicant's Admitted Prior***

Art into the device of combination of ***Mazur*** and ***Ichioka et al.*** by having a probe with a detecting surface area wider than the surface area of a pixel on the substrate. The ordinary artisan would have been motivated to modify combination of ***Mazur*** and ***Ichioka et al.*** in the manner set forth above for the purpose of covering the whole area of the pixel and upgrading the throughput of the test.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over ***Hamburgen (US Pat. 5,198,753)*** in view of ***Ichioka et al. (US Pat. 5,546,013)***.

Regarding claim 9, ***Hamburgen*** shows (Figures 1-3) an integrated circuit test fixture and method comprises: bringing a probe [28] opposite a substrate [24]; introducing a dielectric fluid [33] between the substrate [24] and the probe [28]; forming (Column 2, Lines 64-68) an air or nitrogen flow [33] at the end face of the probe [28]; discharging the dielectric fluid from between the end face of the probe [28] and the air flow (surrounding the probes); supplying signals (supplied by the probe card [26]) to a closed circuit consisting of the substrate [24], dielectric fluid [33], and probe [28]; and detecting the signals (using the probe card [26]) flowing to the closed circuit [24].

Hamburgen fails to disclose bringing a probe opposite a thin-film transistor active matrix substrate. However, ***Ichioka et al.*** shows (Figures 1-14) bringing a probe [28] opposite a thin-film transistor active matrix substrate [12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Ichioka et al.*** into the device

of ***Hamburgen*** by bringing a probe [28] opposite a thin-film transistor active matrix substrate. The ordinary artisan would have been motivated to modify ***Hamburgen*** in the manner set forth above for the purpose of (Column 2, Lines 45-47) to obtain information concerning at least of a level of functionality of said thin-film transistor active matrix substrate for an organic EL panel and quality of contact to said lines.

7. Claim 1, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Howland, Jr. et al. (US Pat. 7,007,408)*** in view of ***Ichioka et al. (US Pat. 5,546,013)***.

Regarding claim 1, ***Howland, Jr. et al.*** shows (Figures 1-7) a method and apparatus for removing and/or preventing surface contamination of a probe comprising: a signal supply device [114] for supplying signals; a probe [106] positioned facing the substrate [102]; a detector [116] for detecting signals flowing to the probe [106]; and a fluid supply device [32] for supplying a dielectric fluid between the substrate [102] and the probe [106].

Howland, Jr. et al. fails to disclose supplying signals to a thin-film transistor active matrix substrate for an organic EL panel. However, ***Ichioka et al.*** shows (Figures 1-14) supplying signals (using tester [46]) to a thin-film transistor active matrix substrate for an organic EL panel [12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Ichioka et al.*** into the device of ***Howland, Jr. et al.*** by supplying signals to a thin-film transistor active matrix

substrate for an organic EL panel. The ordinary artisan would have been motivated to modify ***Howland, Jr. et al.*** in the manner set forth above for the purpose of (Column 2, Lines 45-47) to obtain information concerning at least of a level of functionality of said thin-film transistor active matrix substrate for an organic EL panel and quality of contact to said lines.

Regarding claim 7, ***Howland, Jr. et al.*** shows (Figures 1-7) a method and apparatus for removing and/or preventing surface contamination of a probe comprising: bringing a probe [106] opposite a substrate [102]; introducing a dielectric fluid (using [32]) between the substrate [102] and the probe [106]; supplying signals (using [114]) to a closed circuit consisting of the substrate [102], the dielectric fluid (located inside the probe), and the probe [106]; and detecting (using [116]) signals flowing to the closed circuit [102].

Howland, Jr. et al. fails to disclose bringing a probe opposite a thin-film transistor active matrix substrate for an organic EL panel. However, ***Ichioka et al.*** shows (Figures 1-14) bringing a probe [28] opposite a thin-film transistor active matrix substrate for an organic EL panel [12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Ichioka et al.*** into the device of ***Howland, Jr. et al.*** by bringing a probe [28] opposite a thin-film transistor active matrix substrate for an organic EL panel. The ordinary artisan would have been motivated to modify ***Howland, Jr. et al.*** in the manner set forth above for the purpose of (Column 2, Lines 45-47) to obtain information concerning at least

of a level of functionality of said thin-film transistor active matrix substrate for an organic EL panel and quality of contact to said lines.

Regarding claim 9, ***Howland, Jr. et al.*** shows (Figures 1-7) a method and apparatus for removing and/or preventing surface contamination of a probe comprises: bringing a probe [106] opposite a substrate [102]; introducing a dielectric fluid (using [32]) between the substrate [102] and the probe [106]; forming (Column 4, Lines 30-31) an air or nitrogen flow (using [32]) at the end face of the probe [106]; discharging the dielectric fluid from between the end face of the probe [106] and the air flow (surrounding the probes); supplying signals (using [114]) to a closed circuit consisting of the substrate [102], dielectric fluid (using [32]), and probe [106]; and detecting the signals (using [116]) flowing to the closed circuit [102].

Howland, Jr. et al. fails to disclose bringing a probe opposite a thin-film transistor active matrix substrate. However, ***Ichioka et al.*** shows (Figures 1-14) bringing a probe [28] opposite a thin-film transistor active matrix substrate [12].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of ***Ichioka et al.*** into the device of ***Howland, Jr. et al.*** by bringing a probe [28] opposite a thin-film transistor active matrix substrate. The ordinary artisan would have been motivated to modify ***Howland, Jr. et al.*** in the manner set forth above for the purpose of (Column 2, Lines 45-47) to obtain information concerning at least of a level of

functionality of said thin-film transistor active matrix substrate for an organic EL panel and quality of contact to said lines.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Velez whose telephone number is 571-272-8597. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

04/24/06

PARESH PATEL
PRIMARY EXAMINER

Roberto Velez
Patent Examiner